Comparisons of Job Characteristics

Focus Occupation: Electrical Engineers (17-2071)
Associated Occupation: Engineers, All Other (17-2199)

Compare Knowledge
Compare Skills
Compare Abilities
Compare Detailed Work Activities
Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 96

Focus Occupation: Electrical Engineers (17-2071)
Associated Occupation: Engineers, All Other (17-2199)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	20.1	22.4	>	Current knowledge level is likely sufficient
Mathematics	9.2	17.1	18.1	0	Current knowledge level may be sufficient
Design	5.2	16.5	21.5	>>	Current knowledge level is likely more than sufficient
Computers and Electronics	8.4	15.0	17.7	>	Current knowledge level is likely sufficient
Physics	4.3	14.8	15.3	0	Current knowledge level may be sufficient
Mechanical	6.8	14.0	12.9	0	Current knowledge level may be sufficient
Production and Processing	6.0	12.9	8.0	<<	Extensive education and/or training may be required
Building and Construction	4.0	6.6	8.2	>	Current knowledge level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 92

Focus Occupation: Electrical Engineers (17-2071)
Associated Occupation: Engineers, All Other (17-2199)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Mathematics	6.2	12.8	10.4	<	A higher skill level may be required
Systems Analysis	6.5	11.7	9.2	<	A higher skill level may be required
Science	4.5	11.4	9.4	<	A higher skill level may be required
Systems Evaluation	6.4	11.1	9.8	<	A higher skill level may be required
Operations Analysis	5.0	10.8	9.8	<	A higher skill level may be required
Technology Design	2.6	7.9	5.1	<<	Extensive development of skills in this area may be required

Equipment Selection	3.3	6.3	4.4	<<	Extensive development of skills in this area may be required
Programming	2.2	5.3	2.6	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 97

Focus Occupation: Electrical Engineers (17-2071)
Associated Occupation: Engineers, All Other (17-2199)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Written Comprehension	11.0	15.1	14.8	0	Current ability level may be sufficient
Deductive Reasoning	10.6	15.0	13.9	0	Current ability level may be sufficient
Inductive Reasoning	10.2	13.7	13.5	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	13.4	10.4	<<	Extensive improvement in abilities may be required
Information Ordering	9.9	13.2	12.3	0	Current ability level may be sufficient
Category Flexibility	9.0	12.3	11.4	0	Current ability level may be sufficient
Originality	7.6	11.8	9.7	<	Some improvement in abilities may be required
Visualization	7.5	11.7	8.1	<<	Extensive improvement in abilities may be required
Number Facility	6.3	11.6	10.1	<	Some improvement in abilities may be required
Fluency of Ideas	7.6	11.4	10.2	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

There are no common work activities.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 79

Focus Occupation: Electrical Engineers (17-2071)
Associated Occupation: Engineers, All Other (17-2199)

Tools and Technologies	Exclusivity
Business function specific software	1
Cameras	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Development software	4
Electrical measuring and testing equipment	7

Electronic and communication measuring and testing instruments	14
Electronic manufacturing and processing machinery	56
Indicating and recording instruments	2
Industry specific software	1
Integrated circuits	18
Laboratory decanting and distilling and evaporating and extracting equipment and supplies	19
Laboratory electron and solid state physics equipment	29
Laboratory environmental conditioning equipment	24
Laboratory furnaces and accessories	26
Laboratory heating and drying equipment	13
Length and thickness and distance measuring instruments	2
Light and wave generating and measuring equipment	4
Mechanical instruments	14
Networking software	21
Operating environment software	12
Power conditioning equipment	33
Spectroscopic equipment	10
Temperature and heat measuring instruments	6
Viewing and observing instruments and accessories	4
Weight measuring instruments	7

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.